

REMARKS

We trust that the examiner will now find the application to be in condition for allowance and reconsideration is respectfully requested. In this regard the examiner will first note that the claims have been amended to overcome the objections and 35 USC §112 rejection. For the reasons set forth below it is believed that the claims as amended herein are patentable over the cited art and in condition for allowance.


The present invention relates to strain measurement of fibre reinforced structures (such as, for example, the blades of a wind turbine) and in particular to a manner to compensate for temperature variations. In accordance with the present invention a “passive” reference that is independent of strain is provided to obtain the temperature factor which is used to compensate for temperature change in the “active” strain measurement elements (such as those described at page 2, lines 13-25 of the specification or the Kenny reference). This is accomplished by placing the at least one optical fibre in a loop inside a holder so that the optical fibre length may freely change when subjected to temperature change enabling the fibre to give without imparting strain on the fibre.

The claims stand rejected over the teaching of Kenny et al in view of Johnson et al. It is respectfully submitted that these references neither teach nor suggest the present invention. Kenny discloses FBG strain sensing elements such as those disclosed at page 2, lines 13-25 of the present specification. The Kenny FBGs are encapsulated in an epoxy resin forming a rigid body and thereby causing strain applied to the body to be transmitted to the FBGs. A bend portion may be encapsulated in a flexible body so that strain applied to the rigid body is not transmitted to the bend portions but to the FBGs to enable them to measure the actual strain applied to the rigid body. There is no teaching or suggestion of providing a strain passive reference for determining temperature effect for temperature compensation which is the essence of the present invention. Kenny simply discloses active strain measurement.

Johnson et al discloses a fibre optic connector and a method of embedding it in a composite structure. Again, there is no teaching or suggestion of compensating for temperature variation, much less that of the present invention which consists of providing a loop in an optical fibre that can freely change its length when subjected to temperature change without imparting strain on the optical fibre.

As noted above, the formal issues raised by the examiner have been addressed in the claim amendments presented herein. In view of the above, it is respectfully submitted that the application is now in condition for allowance. A relatively early notification of allowance is respectfully requested.

Respectfully submitted,



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